

“[My first image] of Mt. Taranaki, New Zealand! Really cool to see the abrupt temperature gradient at the transition of the national park (circular area of forest) to farmland; in addition, to urban heat island effects of nearby towns. Thanks team!” – ECOSTRESS Early Adopter



*ECOsysteM Spaceborne Thermal Radiometer
Experiment on Space Station*

Applications and Early Adopters
ECOSTRESS Science and Applications Team
February 12, 2020

Christine M. Lee, ECOSTRESS DPA
Jeff Luvall, ECOSTRESS DPA
Jet Propulsion Laboratory, California Institute of Technology

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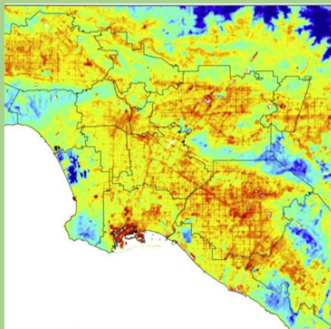
ECOSTRESS Applications

- ISS as a platform for innovative science and applications
- Foundation for applications / applied science set in mission science objectives – focusing on agriculture and drought
- Provision of standard L2 – L4 products enables a primary mission applied science objective, and also for a wide variety of other science / applications themes

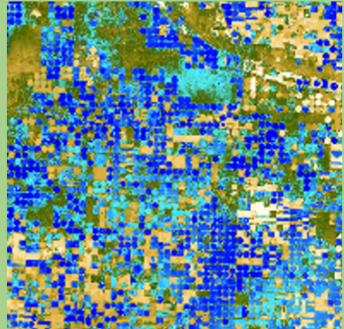


Guiding Tenets

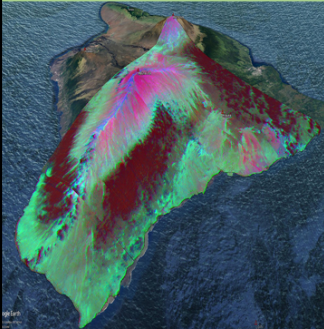
- Build a diverse and agile community of practice towards improving mission goals and outcomes and increase societal benefit
- Reduce mission risk – for ECOSTRESS and future missions like SBG by adapting EAs
- Develop a framework to demonstrate uses, benefits of ECOSTRESS data and provide feedback to project and data systems teams



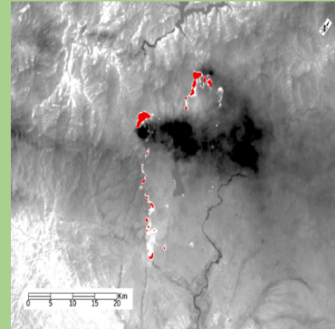
Urban



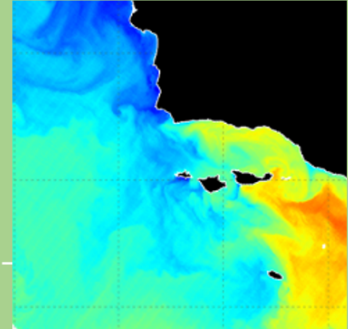
Ecosystems



Volcanoes



Wildfires

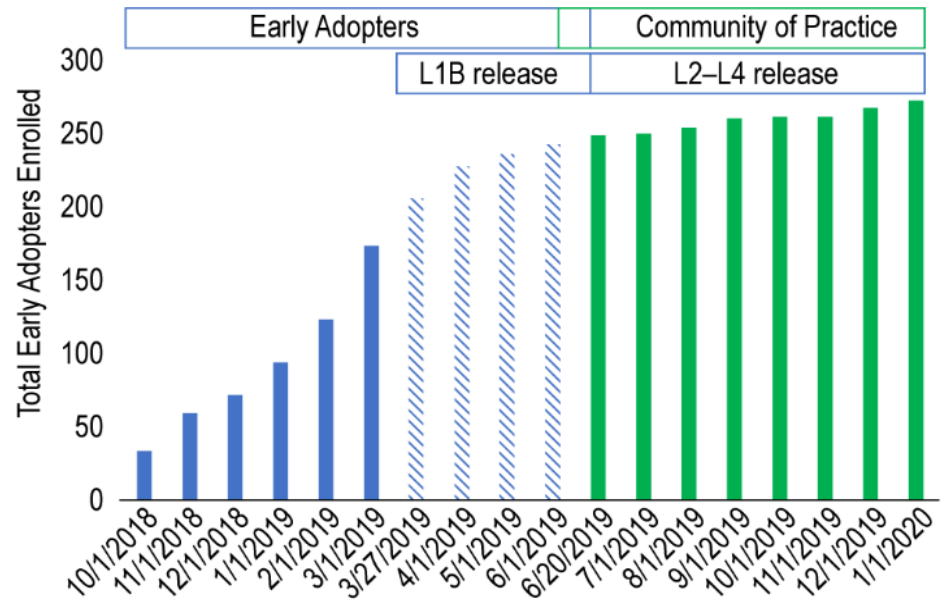


Water

Early Adopters

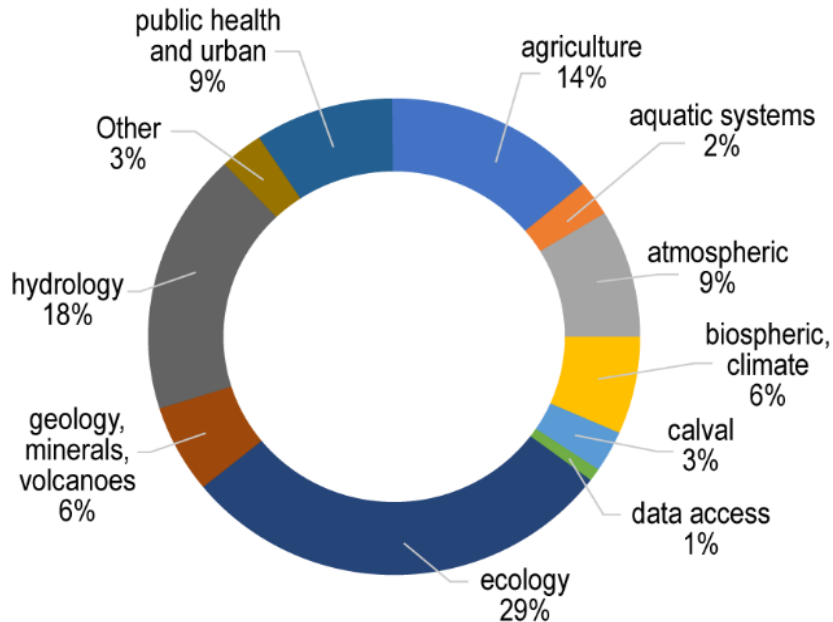
- Early Adopters (EA) initiated in September 2018, after launch
- 35 Adopters granted access initially through NASA Earth data
- 206 EAs at the release of L1B data (March 2019), 249 at L2-L4 release (June 2019)
- After L2-L4, EAs became Community of Practice (COP)

Early Adopters / Community of Practice Membership Growth Over Time

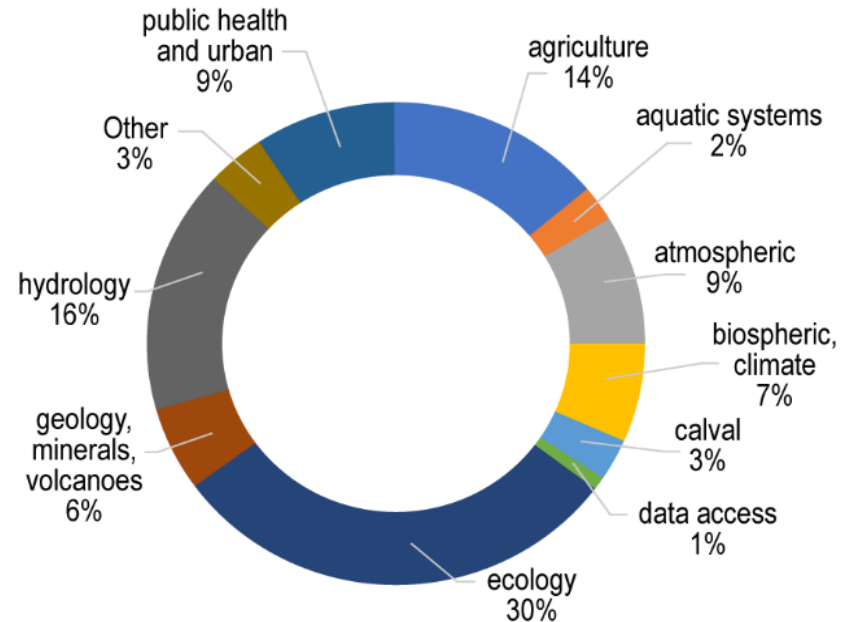


Early Adopters

Early Adopters (251 projects, 249 unique individuals)



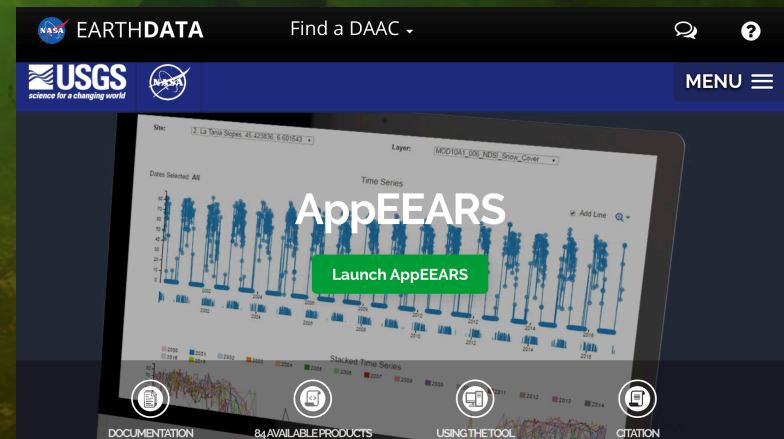
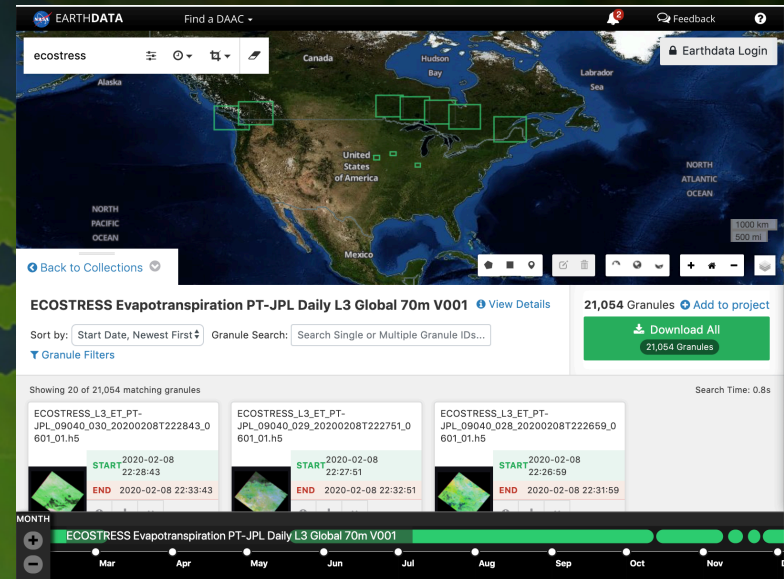
Community of Practice (283 projects, 272 unique individuals)



- 33-35% of Early Adopters self-identified as Applied (about 90 projects)

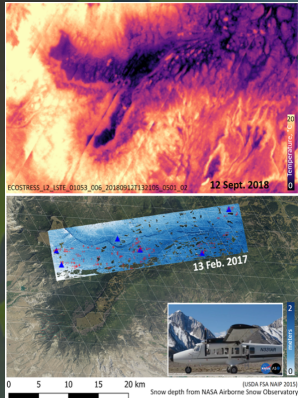
Partnership with LP.DAAC

- Unique collaboration and implementation of Early Adopters
- Close collaboration on trainings (ecostress swath2grid.py → AppEEARS)
- Co-presenting NASA Earthdata webinar, ARSET trainings – the latter which drew 412 participants online from 62 countries, from over 200 unique orgs.

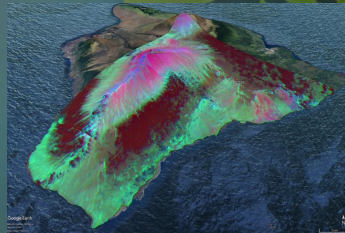


Early Adopter Highlights and Decadal Survey

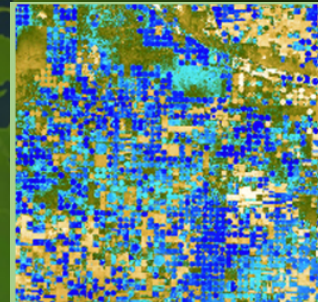
ECOSTRESS Early Adopters have helped demonstrate the necessity of ECOSTRESS data to address critical SBG Most Important, Very Important, and Important questions from the 2017 Decadal Survey, across all TO-18 areas



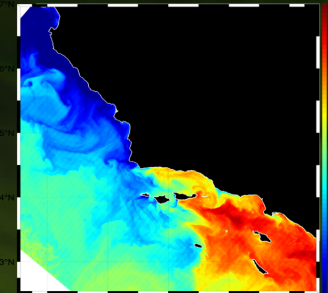
**Cryosphere
and Hydrology**



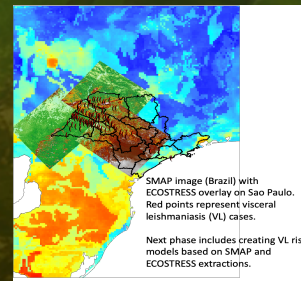
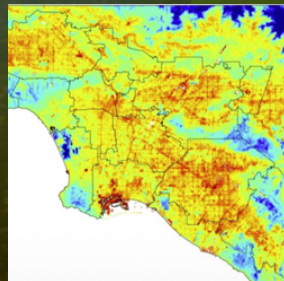
**Surface
Geology**



**Ecosystems
(Terrestrial)**



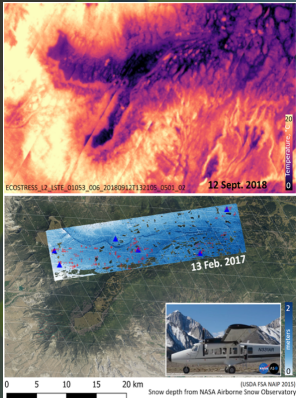
**Ecosystems
(Aquatic)**



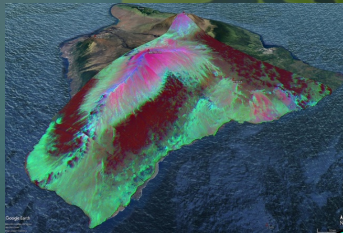
Weather and Public Health

Early Adopter Highlights and Decadal Survey

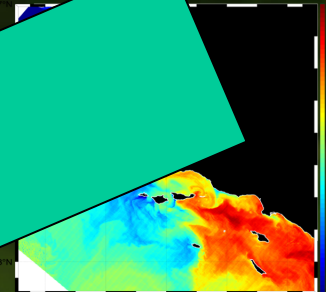
ECOSTRESS Early Adopters have helped demonstrate the necessity of ECOSTRESS data to address critical SBG Most Important, Very Important, and Important questions from the 2017 Decadal Survey, across all TO-18 areas



Cryosphere
and Hydrology

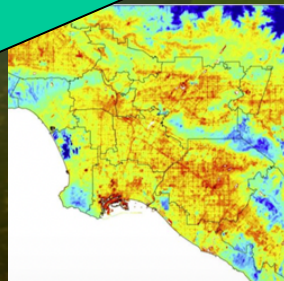


Ecosystems
(Terrestrial)

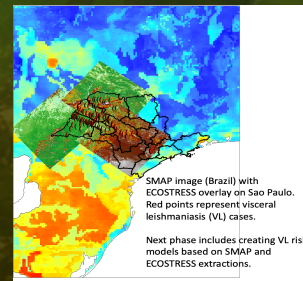


Ecosystems
(Aquatic)

THANK YOU TO OUR EARLY
ADOPTERS!



Weather and Public Health



Join the Community of Practice and Slack Channel

<https://ecostress.jpl.nasa.gov/early-adopters>

ECOSTRESS co...

Christine.M.Lee

Jump to...

appears

ecostress_swath2grid

faq_data_descr

general

l1a-rad

l1b-geo

l2-lste

l3-et-alexi

l3-et-ptjpl

l4-esi-ptjpl

l4-wue-ptjpl

my_first_img

private_ecostress

random

workshop

Direct Messages

Slackbot

Christine.M.Lee (you)

Andreani

Dotis

gvaughan

Hamberg Jonas

leilaher

Mary Ellen

#workshop

51

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Add a topic

here is the xml color ramp

evapotranspiration.xml

1

2

3

4

5

<!DOCTYPE qgis_style>

<qgis_style version="1">

<symbols/>

<colorramps>

<colorramp name="evapotranspiration" type="gradient">

March 21st, 2019

Mary Ellen

4:10 PM

Thank you - I commented out print statements so I at least have files to follow along in qgis

1

Atorregrosa

4:20 PM

thank you

ravery

4:50 PM

Thanks for a fantastic workshop!

ecostress-workshop-ryan-avery-map.png

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ECOSTRESS Workshop Map

Message #workshop

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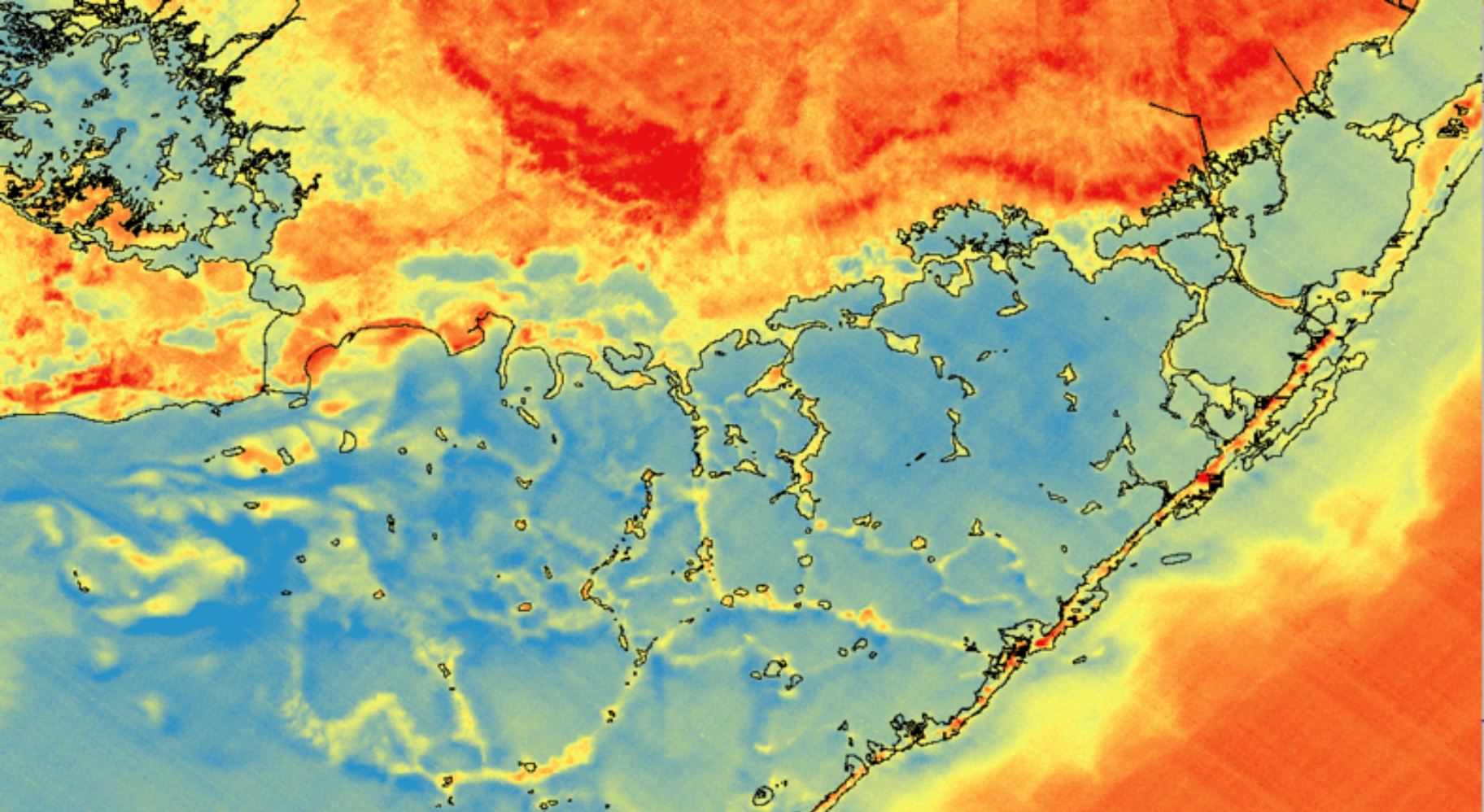
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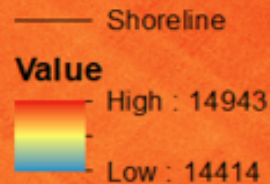
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“Thank you for your help accessing ECOSTRESS data last spring. I am very pleased with the preliminary results. This imagery shows the bathymetry of the shallow mudbanks very nicely! I am [working to improve] the Seagrass Integrated Mapping and Monitoring for the State of Florida.” – ECOSTRESS Early Adopter



10 Kilometers